



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/586,021

04/13/2007

Keiji Sakai

65902(70551)

3251

21874

7590

09/29/2010

EDWARDS ANGELL PALMER & DODGE LLP

P.O. BOX 55874

BOSTON, MA 02205

EXAMINER

CHU, KIM KWOK

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

09/29/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,021	Applicant(s) SAKAI ET AL.	
	Examiner Kim-Kwok CHU	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Pre-Amendment filed on 7/14/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/14/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2627

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 12, last line, the phrase "integrally formed to be separable from other portions" is vague because it is not clear what is meant by "from other portions".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless -
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

4. Claims 1-14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ohyama (U.S. Patent 6,366,548).

Art Unit: 2627

5. Ohyama teaches an optical integrated unit having all the elements and means as recited in claims 1-14. Ohyama teaches the following:

Regarding Claim 1, the optical integrated unit 3 (Fig. 3) comprising:

a light-emitting portion 5 (Figs. 4A and 4B) for emitting a plurality of laser beams having different wavelengths (column 7, lines 55-60); a phase difference plate 21 (Figs. 9A and 9B; column 12, lines 56); a first hologram element 20 (Fig. 9B; diffraction grating element 20 is a hologram) for diffracting a first laser beam (650 nm) of the plurality of laser beams (Fig. 4A; source 5 has two laser emitters 8 and 9) and a second hologram element 20 (Fig. 9A) for diffracting a second laser beam (780 nm) of the plurality of laser beams (Figs. 9A and 9B), wherein

the phase difference plate 21 is formed to act as a $1/4$ wave plate for the first laser beam (650 nm; column 12, lines 62 and 63) and to act as a λ plate (wave plate) or a $\lambda/2$ plate for the second laser beam (Fig. 9A; plate 21 is a wave plate; column 12, lines 60 and 61).

Regarding Claim 2, the light-emitting portion 5 (Figs. 4A and 4B) is formed such that a wavelength of the first laser beam (from source 9; 650 nm; column 7, line 66) is shorter than a

Art Unit: 2627

wavelength of the second laser beam (from source 8; 780 nm; column 7, line 65), the first hologram element 20 has a polarization characteristic (Fig. 9B), and the second hologram element 20 is formed not to depend on a polarization state (Fig. 9A).

Regarding Claim 3, the light-emitting portion 5 is formed such that a wavelength of the first laser beam (source 9 emits 650 nm; column 7, lines 66) is shorter than a wavelength of the second laser beam (source 8 emits 780 nm; column 7, lines 65), the first hologram element 20 has a polarization characteristic (Fig. 9B; 650 nm light beam), and the second hologram element 20 (Fig. 9A; 780 nm light beam) is formed not to diffract the first laser beam (650 nm) and to diffract the second laser beam 780 nm (Fig. 9A).

Regarding Claim 4, an oscillation light division means 13/14 (Fig. 9A) for dividing oscillation light from the light-emitting portion 5 into at least three (light is diffracted by 14 into 3 beams).

Regarding Claim 5, the oscillation light division means 13/14 includes a first oscillation light diffraction grating 13 for dividing the first laser beam (Fig. 9B; 650 nm is divided into three beams) and a second oscillation light diffraction grating 14 for dividing the second laser beam (Fig. 9A; 780 nm).

Art Unit: 2627

Regarding Claim 6, the oscillation light division means 13/14 includes a diffraction grating 13/14 formed to divide the first laser beam (650 nm) and the second laser beam (Figs. 9A and 9B).

Regarding Claim 7, one light-receiving portion 4a, 4b for receiving the plurality of laser beams (Fig. 3), wherein the first laser beam and the second laser beam are received at the one light-receiving portion (Fig. 3).

Regarding Claim 8, a light-receiving portion 4a, 4b (Fig. 3) for receiving the plurality of laser beams, wherein the light-emitting portion 5, the light-receiving portion, the first hologram element 20 and the second hologram element 20 are integrated (Fig. 3).

Regarding Claim 9, a light-receiving portion 4a, 4b for receiving the plurality of laser beams, wherein the light-emitting portion 5, the light-receiving portion 4a, 4b, the first hologram element 20 and the second hologram element 20 and the phase difference plate 21 are integrated (Figs. 3, 9A and 9B).

Regarding Claim 10, the optical integrated unit further includes an oscillation light division means 13, 14, for dividing oscillation light from the light emitting portion 5 into at least three; and a light-receiving portion 4a, 4b for

Art Unit: 2627

receiving the plurality of laser beams (Fig. 3), wherein the light emitting portion 5, the light-receiving portion 4a, 4b, the first hologram element 20, the second hologram element 20, and the oscillation light division means 13/14 are integrated (Figs. 3, 9A and 9B).

Regarding Claim 11, the optical integrated unit further comprising: oscillation light division means 13/ 14 (Figs. 9a and 9B), for dividing oscillation light from the light emitting portion 5 into at least three; and a light-receiving portion 4a, 4b for receiving the plurality of laser beams (Fig. 30, wherein the light emitting portion 5, the light-receiving portion 4a, 4b, the first hologram element 20 the second hologram element 20, the phase difference plate 21, and the oscillation light division means 13/14 are integrated (Figs. 3, 9A and 9B).

Regarding Claim 12, the light emitting portion 5 is integrally formed to be separable from other portions (Figs. 4A and 4B; light beam can be divided into light portions by diffraction grating means 13/14).

Regarding Claim 13, the optical integrated unit further comprises an objective lens 11 for collecting emitted laser beam on an information surface of an optical disk 10 (Fig. 3).

Regarding Claim 14, the optical pickup device further comprising: oscillation light division means 13/14 (Figs. 9A and

Art Unit: 2627

9B) for dividing oscillation light from the light emitting portion 5 into at least three (Figs. 9A and 9B; and a light receiving portion 4a, 4b for receiving the plurality of laser beams (Fig. 3), wherein the light emitting portion 5 is formed such that a wavelength of the first laser beam (650 nm) is shorter than a wavelength of the second laser beam (780 nm), the first hologram element 200 has a polarization characteristic (Fig. 9B), the second hologram element 20 is formed not to depend on a polarization state (Fig. 9A), and the light emitting portion 5, the light receiving portion 4a, 4b, the first hologram element 20 the second hologram element 20, the phase difference plate 21 and the oscillation light division means 13/14 are integrated.

Art Unit: 2627

6. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen, can be reached on (571) 272-7579.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

/Kim-Kwok CHU/
Examiner AU2627

September 20, 2010
(571) 272-7585
/HOA T NGUYEN/

Supervisory Patent Examiner, Art Unit 2627